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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,180	09/29/2005	Katsumasa Ono	159-98	1837
23117 7590 04/14/2008 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER CALANDRA, ANTHONY J	
			ART UNIT	PAPER NUMBER
			1791	
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			04/14/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/551,180	<b>Applicant(s)</b> ONO ET AL.	
	<b>Examiner</b> ANTHONY J. CALANDRA	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 29 September 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/2/2007 and 9/29/2005</u> .                                  | 6) <input type="checkbox"/> Other: _____                          |

***Detailed Office Action***

1. The communication dated 9/25/2005 have been entered and fully considered.
2. Claims 1-8 are currently pending.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 5 provides for the use of printed paper in ink jet recording, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim 5 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claim 6 is rejected under 35 U.S.C. 102(b) as being anticipated by Handbook for Pulp and Paper Technologists by SMOOK, hereinafter SMOOK.

As for claim 6, SMOOK discloses an apparatus comprising coating head and a casting drum [pg. 292 Figure 18-19 and pg. 290 paragraph 5]. SMOOK further discloses a conditioning chamber with an inlet for paper and an outlet for paper [pg. 346 Figure 23-6]. SMOOK discloses the high velocity impingement of air [pg. 345] and shows such air jets in Figure 23-6, examiner has interpreted the impingement air jets as blowers. The apparatus drawing shows the conditioner as having opening which examiner has interpreted as air vents [pg. 346 Figure 23-6]. The recitation of temperature, humidity, and time are intended uses of the apparatus which SMOOK can perform.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook for Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of U.S. Patent # 2,560,039 HARLOW, hereinafter HARLOW.

As for claim 7, SMOOK does not disclose an expander roll. HARLOW discloses an expander roll apparatus used for paper making [column 1 lines 5-10]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to include an expander roll in the apparatus taught by SMOOK as taught by HARLOW. A person of ordinary skill in the art would be clearly motivated to include an expander roll instead of a traditional roll as HARLOW states that expander rolls prevent creases, wrinkles and insure the maximum width of product [column 1 lines 10-15].

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook for Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of U.S. Patent # 4,853,255 ONISHI et al, hereinafter ONISHI.

SMOOK does not disclose an apparatus for wetting the bottom of the paper sheet on the opposite side of a coated paper. ONISHI discloses that a coated paper should have the opposite side wetted with water before drying [abstract and figure 1]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the apparatus of SMOOK with the opposite sheet side wetting apparatus of ONISHI. A person of ordinary skill in the art would be clearly motivated to do so by ONISHI whom discloses that sheet wetting can eliminate curling of paper [abstract].

11. Claims 1, 2, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. (Examiner relied on Derwent summary 1991-272695), hereinafter BABINSKII.

As for claim 1, SMOOK discloses a cast coating process wherein a paper web is coated (*a process for producing a cast-coated paper* [pg. 290 paragraph 5]).

SMOOK discloses that coatings can contain pigments and adhesives (*steps of applying a coating color comprising a pigment and an adhesive* [pg.288 Table 18-3]). SMOOK discloses that during the cast-coating process pigments are added onto the paper and then the paper is pressed onto a Yankee cylinder or machine glazed cylinder where it is dried (*one side of a base paper, and pressing/drying the coated layer in a wet state against a mirror surface of a casting drum* [pg. 290 paragraph 5 and pg. 292 Figure 18-19]).

SMOOK discloses that for printing paper grades it is useful to condition the paper before reeling the paper [pg. 345-346]. Conditioning the paper adds moisture so that the paper can expand and have good flatness. BABINSKII discloses conditioning paper at a relative humidity range of 60-80% which falls within the instant claimed range. BABINSKII further discloses that the treatment should take place at 60-80 degrees C which falls within the instant claimed range (*wherein said process further comprises the step of adding moisture to the coated paper by maintaining it in an air conditioned at 20°C to 80°C, 50 to 95% RH for 20 seconds or more after pressing/drying the coated layer against a casting drum and before reeling* [Derwent summary paragraph 1]). At the time of the invention it would have been obvious to condition the paper of SMOOK using the conditioning process of BABINSKII. A person of ordinary skill in the art would be motivated to combine SMOOK with BABINSKII because conditioning is a process that is useful for printing papers [SMOOK pg. 345] and the process of BABINSKII insures a high quality product while reducing the duration of treatment and required temperature (Derwent). Further, it is *prima facie* obvious to apply a known method to another known method

ready for improvement. In the instant case the paper of SMOOK would be ready for improvement by treating it in a conditioning process of BABINSKII. A person of ordinary skill in the art would expect the treatment of BABINSKII to help improve paper flatness.

Neither SMOOK nor BABINSKI disclose the treatment time during conditioning. However, at the time of the invention it would have been *prima facie* obvious to optimize the treatment time to greater than 20 seconds [see e.g. MPEP 2144.05 (II) (B) Optimization of ranges and result effective variable]. Time is a clear result-effective variable as increasing treatment time will increase the amount of moisture added to sheet and adjusting it would have been well known to a person of ordinary skill in the art.

As for claim 2, BABINSKII discloses that air is blown onto the sheet surface [DERWENT summary] opposite the carrying rolls. BABINSKII shows that both sides of the paper are exposed to the carrying rolls thus both sides of the paper are subject to blowing air [BABINSKII Figure 1].

As for claim 5, SMOOK discloses that coated papers are used for printing [pg. 286] and conditioned papers are used for printing [pg. 345]. Ink jet recording is a type of printing.

12. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. as applied to claims 1, 2, and 5 above, and further in view of U.S. Patent # 2,560,039 HARLOW, hereinafter HARLOW.

As for claim 3, neither SMOOK nor BABINSKII disclose using an expander roll. HARLOW discloses an expander roll used for paper making [column 1 lines 5-10]. At the time

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of the invention it would have been obvious to a person of ordinary skill in the art to use an expander roll in the process of SMOOK and BABINSKII as taught by HARLOW. A person of ordinary skill in the art would be clearly motivated to use an expander roll instead of a traditional roll as HARLOW states that expander rolls prevent creases, wrinkles and insure the maximum width of product [column 1 lines 10-15].

13. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Handbook For Pulp and Paper Technologists by SMOOK, hereinafter SMOOK, in view of Foreign Publication SU-1618803A BABINSKII et al. as applied to claims 1, 2, and 5 above, and further in view of U.S. Patent # 4,853,255 ONISHI et al, hereinafter ONISHI.

Neither SMOOK nor BABINSKII disclose wetting the bottom of the paper sheet on the opposite side of a coated paper. ONISHI discloses that a coated paper should have the opposite side wetted with water before drying [abstract and figure 1]. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the process of SMOOK and BANINSKII with the opposite sheet side wetting of ONISHI. A person of ordinary skill in the art would be clearly motivated to do so by ONISHI whom discloses that sheet wetting can eliminate curling of paper [abstract].

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ANTHONY J. CALANDRA whose telephone number is (571) 270-5124. The examiner can normally be reached on Monday through Friday, 7:30 AM-5:00 PM.



If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Steven P. Griffin/  
Supervisory Patent Examiner, Art Unit  
1791

AJC